REMARKS

Claims 1, 22 and 36, all of the independent claims, have been amended. Claims 1 to 56 remain active in this application.

Claims 1, 3, 4, 7 to 12, 14 to 19, 21, 22, 24, 25, 31 to 33 and 35 to 38 were rejected under 35 U.S.C. 102(e) as being anticipated by Ylitalo et al. (U.S. 6,788,661). The rejection is respectfully traversed.

The system of Ylitalo et all. appears to operate in an entirely different manner from that of the subject invention. As stated at column 11 in the second and third paragraphs, the beams generated by each antenna is based upon adjusted transmit powers (lines 21 and 33). In accordance with the present invention, the signal paths utilize only a sector of the cell in which the user is present, thereby allowing multiple like signals to be made available within the cell with minimal interference.

The above is brought out in claim 1, for example, which requires, among other steps, the steps of determining sectors of a cell and determining a first downlink transmission beam and a second downlink transmission beam in the sectors based on a received user-derived signal, the first downlink transmission beam being substantially uncorrelated with the second downlink transmission beam, the first downlink transmission beam being associated with a portion within a first sector of the spatial domain, the second downlink transmission beam being associated with a portion within a second sector. No such steps are taught or suggested by Ylitalo et al.

Claim 1 further requires the steps of diversity encoding a first signal in the first sector to produce a first diversity-encoded signal and diversity encoding a second signal

in said second sector to produce a second diversity-encoded signal. No such steps are taught or suggested by Ylitalo et al. either alone or in the combination as claimed.

Claim 1 yet further requires the steps of sending the first diversity-encoded signal over the first downlink transmission beam and sending the second diversity-encoded signal over the second downlink transmission beam. No such steps are taught or suggested by Ylitalo et al. either alone or in the combination as claimed.

Steps similar to those discussed above with reference to claim 1 are found in claim 22. Accordingly, the above argument applies as well to claim 22.

Claims 3, 4, 7 to 12, 14 to 19 and 21 depend from claim 1 and claims 24 to 29, 31 to 33 and 35 depend from claim 22 and therefore define patentably over Ylitalo et al. for at least the reasons presented above with reference to the independent claim from which they depend.

Claim 36 requires, among other features, a searcher configured to identify a received user-derived signal within a cell having plural sectors and an antenna array coupled to the first transmit beam switch and the second transmit beam switch, the antenna array configured to define a first downlink transmission beam and a second downlink transmission beam, the first downlink transmission beam being associated with a portion within a first sector, the second downlink transmission beam being associated with a portion within a second sector, the first downlink transmission beam being substantially uncorrelated to the second downlink transmission beam, the first downlink transmission beam being associated with the first diversity-encoded signal, the second downlink transmission beam being associated with the second diversity-encoded signal. No such structure is taught or suggested by Ylitalo et al. for reasons discussed above.

Claim 37 and 38 depend from claim 36 and therefore define patentably over Ylitalo et al. for at least the reasons presented above with reference to claim 36.

Claims 2, 5 and 13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ylitalo et al. in view of Ionescu (U.S. 6,603,809). The rejection is respectfully traversed.

Claims 2, 5 and 13 depend from claim 1 and therefore define patentably over the applied reference for at least the reasons presented above with reference to claim 1 since Ionescu fails to overcome the above-listed deficiencies in Ylitalo et al.

Claims 5, 6, 13, 23 and 30 were rejected under 35 U.S.C.103(a) as being unpatentable over Ylitalo et al. in view of Dajer (U.S. 6,539,209). The rejection is respectfully traversed.

These claims depend from claim 1 or 22 and therefore define patentably over the applied reference for at least the reasons presented above with reference to claim 1 since Dajer fails to overcome the above-listed deficiencies in Ylitalo et al.

Claims 20, 35 and 39 to 56 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ylitalo et al. in view of Jajer and Thibault (U.S. 6,240,098). The rejection is respectfully traversed.

These claims depend from claim 1, 22 or 36 and therefore define patentably over the applied reference for at least the reasons presented above with reference to claim 1 since both Dajer and Thibault fails to overcome the above-listed deficiencies in Ylitalo et al.

In view of the above remarks, favorable reconsideration and allowance are respectfully requested.

Respectfully submitted,

Jay M. Cantor
Attorney for Applicant(s)
Reg. No. 19,906

Texas Instruments Incorporated
P. O. Box 655474, MS 3999
Dallas, Texas 75265
(301) 424-0355 (Phone)
(972) 917-5293 (Phone)
(301) 279-0038 (Fax)